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U.S. RICE

DISTRIBUTION PATTERNS 1972/73

ECONOMIC RESEARCH SERVICE

U.S. DEPARTMENT OF AGRICULTURE

ABSTRACT

Rice distribution data for the 1972/73 marketing year are summarized from a mail survey of all known rice milling and repackaging firms in the United States. Data from previous such studies are used in making comparisions with other years, particularly 1971/72. Data shown include amounts of rice distributed for direct food use by States, regions, and territories, and by size of package, type of grain, and specialty rice. Quantities shipped to processors for use in principal products are shown, as well as trends in domestic distribution and use of rice and their relationship to certain factors. Government distribution to both civilian and military populations is shown. Also, there is related information such as percentage of rice packaged in consumer-sized packages, labeled under another firm's brand name, percentages distributed by mills and repackagers to wholesale, retail, and institutional outlets; and percentages of enriched rice distributed for direct food use in the United States and territories. In addition, information on talc-coated rice is shown.

Keywords: Rice, distribution by size, domestic market, trends, packaging, specialty rice, enriched.

PREFACE

This report updates previous studies for marketing years beginning in August 1956, 1961, 1966 and 1971. These reports provide information on the changing economic structure of the rice industry and aid the U.S. Department of Agriculture in its research for efficient location patterns for rice marketing facilities and on international trade policies in rice. They will also help rice producers, millers, and packagers to plan marketing and related decisions fundamental to growth of a sound, viable industry.

Robert Otto, Commodity Economics Division, Economic Research Service, USDA, provided the ADP support for data computations. Appreciation is also expressed to the Rice Millers' Association and the Rice Council for their support of the study, and to the rice millers and repackagers whose cooperation made the study possible and enabled complete coverage again of rice distribution for the marketing year 1972/73.

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SUMMARY

Rice distributed in the United States in the 1972/73 marketing year totaled 3.3 percent more than in 1971/72, an increase of about 680,300 hundredweight. The longrun trend has been up, although the previous survey had indicated that domestic demand for rice for all uses leveled off in 1971/72.

Annual per capita consumption of rice for food declined an average of 0.4 pound between 1967-70 and 1970-73. Although an increase was shown in rice distribution for food use in 1972/73 over 1971/72, it was not enough to indicate an upward trend in per capita use. Direct food use increased more than enough to offset the decline in amount distributed for processed food use. Also, there was a sharper increase in rice used for beer, which was the most significant in increasing the total amount distributed.

Rice millers accounted for about 90 percent of the rice shipments to all domestic outlets combined: Civilian direct food use, food processors, and beer manufacturers. Distribution by the U.S. Department of Agriculture within the United States declined nearly 17 percent in 1972/73.

Over half of the rice distributed in the United States for direct food use (excluding Government) was in consumer packages of 5 pounds and less in 1972/73. Over 21 percent was specialty rice, up from over 18 percent in 1971/72.

Four U.S. regions, accounting for about 56 percent of the population, took more than 77 percent of the rice distributed for direct food use in 1972/73. In order of importance, they are the Middle Atlantic and Pacific; the South Atlantic and West South Central regions tied for third place. The West North Central Region showed the greatest relative increase, rising from seventh to sixth place in per capita rice distribution and from eighth to fifth place in total distribution for direct food use.

California, New York, New Jersey, Texas, and Louisiana ranked in that order in total rice distributed, accounting for 51 percent of the 1972/73 distribution.

Long grain rice continued to increase in popularity and accounted for over 67 percent of the rice distributed for direct food use. Long and medium grain combined accounted for over 98 percent.

The Department of Defense distributed 213,478 hundredweight of rice in 1972/73, much below 1969/70 but well above the 159,644 hundredweight distributed in 1971/72. This was largely because no purchases were made for overseas indigenous feeding connected with the military in 1971/72, but in 1972/73 there were 62,370 hundredweight bought.

Total shipments to U.S. territories declined although Government distribution increased over 60 percent. Short and medium grain accounted for nearly 93 percent of the total rice distributed in 1972/73. Short grain going to Puerto Rico was most popular, but declined from about 76 to 72 percent of the total; long grain shipments gained the most.

U.S. RICE DISTRIBUTION PATTERNS, 1972/73

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BACKGROUND AND METHODOLOGY

Rice production in the United States has more than doubled in the last 20 years. Although most rice is exported, domestic distribution and consumption trended up and are important to a viable rice industry. Such factors as price, ethnic origin of consumers, and changes in tastes, eating habits, food preparation methods, and menus may be important in affecting consumer demand for rice.

This report provides information on the commercial distribution of U.S. rice by market location during the 1972/73 marketing year (August 1 to July 31). Such information is important to an orderly and sustained market development effort. Data are from a mail survey of 36 milling firms and 12 repackaging firms (all known operating firms). Supplementary data on rice distributed by the Federal Government were obtained from Government sources.

Patterns of rice distribution are shown by type of outlet. For that distributed to wholesale, retail, and institutional outlets for direct food use, information on package size, type of grain, quantity of specialty[1/] and enriched[2/] rice, and related information was developed by States and regions of the United States and for the territories.

Data for 1972/73 are compared with data for 1971/72 and, in certain cases, with earlier data. [3/] These comparisons may serve as a basis for evaluating the changing pattern of rice distribution and provide insights into distribution and consumption trends.

RICE DISTRIBUTION FOR CIVILIAN USE [4/]

The volume of milled rice distributed for all uses by the

1/ Specialty rice includes parboiled, precooked, brown, and other than regularly milled rice. Rice mixes, spiced rice, and rice which has anything added other than enrichment ingredients is processed rice and is covered separately in this report.

2/ Thiamin, niacin, and iron added.

3/ Eiland, J.C. and Moriak, Theo F., Market Patterns for U.S. Rice, 1971/72, U.S. Dept. Agr., ERS-528, August 1973.

4/ Includes rice distributed to the 50 States for civilian food and related uses. Territorial and military distributions are not included here but later in this report.

civilian population in the United States was 21,053,400 hundredweight in 1972/73 compared with 20,373,100 hundredweight in 1971/72, an increase of 3.3 percent (table 1). During the year, distribution changed as follows:

Direct food use	up 3.8 percent
Processed foods	down 8.1 percent
Total food use	up 1.3 percent
Beer manufacturing	up 11.6 percent
Total use	up 3.3 percent

The quantity distributed to all uses rose 680,300 hundredweight. The quantity distributed to breweries accounted for 471,700 hundredweight of that increase. Distribution for all food use rose 208,600 hundredweight. These changes shifted the share of the total distributed for all civilian food uses from 80 to 78 percent. Direct food use accounted for 63 percent of the 1972/73 distribution, unchanged from 1971/72.

Civilian per capita consumption of rice as food has declined slightly from the high of 8.3 pounds in 1968/69. Average annual consumption was 7.2 pounds per capita during the 3-year period August 1970 - July 1973, down 0.4 pounds from the 1967-70 average (table 2). This would indicate a decline in average annual consumption for food of 264,000 hundredweight annually between these 3-year periods. However, per capita figures seem to have leveled off at about 7.0 pounds--at least in the last 2 years. This leveling, together with increased population, resulted in an apparent resumption of increased total annual consumption.

Rice millers distributed the bulk of the rice in both 1971/72 and 1972/73. The following quantities were distributed by mills, repackagers, and the Government for use by civilian population within the United States:

Use and distributor	1971/72	1972/73
	1,000 cwt.	
Direct food:		
Mills	10,610.9	11,301.4
Repackagers	1,422.9	1,355.3
Government	802.0	668.6
Processed food:		
Mills and repackagers	3,455.3	3,174.4
Beer:		
Mills	4,082.0	4,553.7
Total	20,373.1	21,053.4

Most of the rice distributed to food processors was shipped from mills and only a small amount from repackaging plants. Some of the rice distributed for direct food use was converted from regular milled rice to specialty rice (precooked) by repackagers.

In this study, rice converted by repackagers is treated as rice for food use and not as rice for processed food use.

DISTRIBUTION OF RICE FOR DIRECT FOOD USE, BY REGIONS AND STATES 5/

Four regions of the United States, with about 56 percent of the civilian population, accounted for over 77 percent of the rice distributed in 1972/73--about the same as a year earlier (table 3). In order of their rank in total distribution in 1972/73, they are the Middle Atlantic and Pacific with the South Atlantic and West South Central regions tied for third. 6/ These four regions also ranked highest in per capita distribution of rice, but in slightly different order.

Five regions increased their shares of U.S. total rice distribution; five also increased their per capita distribution and one was unchanged. Per capita distribution increased 0.1 pound nationally between 1971/72 and 1972/73.

California, New York, New Jersey, Texas and Louisiana (in that order) accounted for 51 percent of the rice distributed in 1972/73 (table 4). The top five States have consistently accounted for about 50 percent of the rice distributed, as these studies have shown. However, the States falling in the top five vary, as well as the ranking of the top five. Texas replaced Florida among the top five in 1972/73. Minnesota had the greatest increase of any State and the West North Central region had the greatest regional increase.

Package Information

In 1972/73, slightly over half the rice distributed--excluding Government distribution--for direct food use by the civilian population was in packages of 5 pounds and less. Over 20 percent was shipped in containers of 5.1 through 25 pounds. The remainder was shipped in containers larger than 25 pounds and in bulk (tables 4 and 5).

Six regions had an increase in rice distributed for direct food use in 1972/73. Only one showed a decline in quantity distributed in packages of 5 pounds and under and only one of four with a decline in total distributed had a decline in the smaller size packages.

5/ Includes only rice distributed to wholesale, retail, and institutional outlets and rice distributed by USDA's Food and Nutrition Service to schools, institutions, and for welfare, all of which was for consumption by the civilian domestic population.

6/ See table 4 for a listing of States in each region of the United States.

Of the 1,431,614 hundredweight of rice that repackagers reported receiving from mills, 11.9 percent was packaged by the mills under the repackager's label. Only 17.1 percent of the rice shipped by mills and repackagers to wholesale, retail, and institutional outlets in the United States in packages of 25 pounds and less was packaged under another firm's brand name.

Specialty Rice

More than 21 percent of the rice distributed by mills and repackagers for direct food use in 1972/73 was specialty rice (table 4). This was up from 18.1 percent in 1971/72 (table 5). An upward trend in the use of specialty rice seems well established.

Specialty rice as a percentage of all rice distributed for direct food use varied from 1 percent in Hawaii to 89 percent in Alaska. States and regions with lower per capita distribution continued to have higher percentages of specialty rice.

Mills and repackagers reported shipments of 2,768,700 hundredweight of specialty rice to the States and territories in 1972/73, over 400,000 hundredweight more than in 1971/72. Over 58 percent of it was parboiled and 27.6 percent was precooked. Over 96 percent of all specialty rice was long grain rice (table 6).

Type of Rice

Long and medium grain rice continue to be most popular in commercial distribution for direct food use. These types accounted for over 98 percent of such rice distribution in the United States in 1972/73, up from earlier years. Long grain rice continued to be most popular, amounting to 67 percent of the total distributed for direct food use. Long grain was the most popular in all regions except West North Central. Medium grain was most popular there and was almost as popular as long grain in the Pacific region in 1972/73 (table 5).

Enriched Rice and Talc-coated

Some rice is enriched by adding thiamin, niacin, and iron during the milling process. Riboflavin, vitamin D, and calcium may or may not be added in enriched rice or in unenriched rice. Also some rice, whether enriched or not, may be talc-coated to improve its appearance.

Over 47 percent of the 12,043,700 hundredweight distributed by the mills to outlets in the 48 conterminous States for direct food use was enriched. Although this is based on a slightly different distribution than data in 1971/72, it represents a sizable increase. Of the 5,677,100 hundredweight enriched rice, 84 percent was a powdered form and 16 percent was a rinse resistant premix (table 7).

Of the total, again nearly 25 percent was talc-coated in 1972/73. The amount of talc and glucose added to this rice was 0.46 and 0.45 pound per hundredweight of rice, respectively (table 7).

Very little of the total table rice distributed in these 48 States had either riboflavin or vitamin D added. Only 0.9 percent had riboflavin added and only 0.1 percent vitamin D. But nearly a fourth of all table rice distributed for direct food use had calcium added (table 7).

Government Distribution

Government distribution of rice was handled by the Departments of Agriculture and Defense. Neither of these distributions included rice purchased from commercial sources for supplying military commissaries in the United States or commissaries operated by nonmilitary Government agencies abroad. Both of these outlets purchased on the open market and therefore their distribution is presumed to be included in commercial distribution for direct food use, shown in table 4.

USDA rice distribution to schools, institutions, and welfare agencies in the United States declined from 802,001 hundredweight in 1971/72 to 668,620 in 1972/73 (table 8). Distribution to territories for these uses increased by about 162,300 hundredweight or over 60 percent. Total distribution to States and territories by USDA increased by nearly 3 percent. Sixty-one percent of this rice went to welfare agencies, 31 percent to schools, and 8 percent to institutions in 1972/73.

The Department of Defense distributed 213,478 hundredweight of rice in 1972/73, a third more than the 159,644 hundredweight distributed in 1971/72 (table 9). Specification purchases for Armed Forces feeding were up nearly 20 percent but purchases for overseas indigenous feeding connected with the military jumped from zero in 1971/72 to 62,370 hundredweight. However, brandname purchases for resale in overseas military commissaries declined from 113,352 hundredweight in 1971/72 to 95,788 in 1972/73.

DISTRIBUTION OF RICE FOR PROCESSING USE

Processing uses (food and beer) took 7,728,100 hundredweight--about 37 percent of all rice distributed in the United State in 1972/73 (table 10). This was about the same percentage as in 1971/72, but 190,700 hundredweight more rice. Rice used for beer increased from 54.2 percent of rice for all processing uses in 1971/72 to 58.9 percent in 1972/73, an increase of 471,700 hundredweight.

In addition to beer use, there was an increase in the quantity ~~of rice distributed for cereal and baby foods for most processed~~

products. Large relative increases for use in soup and in package mixes in 1971/72 were followed by significant relative declines in 1972/73.

DISTRIBUTION OF RICE TO TERRITORIES

Puerto Rico, as in earlier years, accounted for over 90 percent of all territorial shipments of rice in 1972/73. The per capita quantities shipped to the Virgin Islands had declined by nearly one-half between 1969/70 and 1971/72 but remained about unchanged in 1972/73. Short grain was still most popular in the territories in 1972/73, accounting for 68.8 percent of the total. Millers and repackagers reported shipments to the trust territories in 1972/73 whereas none were reported for 1971/72. Per capita distributed to these territories doubled in 1972/73.

EXPORTS

Millers and repackagers reported that 37,872,280 hundredweight of their rice shipments--excluding territorial shipments--went to export markets in 1972/73.[7]/ This rice was 51.1 percent long grain, 45.7 percent medium grain, and 3.2 percent short grain. Nearly 12,9000,000 hundredweight was specialty rice. Of all exported rice, 1,117,503 hundredweight was in packages of 5 pounds and less, 314,899 hundredweight was in packages of 5.1 pounds through 25 pounds, and the remainder, or 36,439,878 hundredweight, was in larger packages or bulk.

7/ This figure may differ from the official export figure for this marketing year. Millers' and repackagers' shipments to the export market went mostly to exporters, who in turn may have actually exported more or less than they received.

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Table 1.--Milled rice: Distribution by rice millers, repackagers, and Government, by use, United States, marketing years 1956/57, 1961/62, 1966/67, 1971/72 and 1972/73 1/

Year 2/	Unit	Distribution for--3/				Total
		Direct food use 4/	Processed food use	Total food use	Use by brewers	
1956/57:						
Amount	1,000 cwt.	8,707.7	1,560.6	10,268.3	2,776.4	13,044.7
Percentage of total	Percent	66.7	12.0	78.7	21.3	100.0
1961/62:						
Amount	1,000 cwt.	11,294.8	2,270.5	13,565.3	2,982.4	16,547.7
Percentage of total	Percent	68.3	13.7	82.0	18.0	100.0
1966/67:						
Amount	1,000 cwt.	11,087.0	2,961.1	14,048.1	3,147.5	17,195.6
Percentage of total	Percent	64.5	17.2	81.7	18.3	100.0
1971/72:						
Amount	1,000 cwt.	12,835.8	3,455.3	16,291.1	4,082.0	20,373.1
Percentage of total	Percent	63.0	17.0	80.0	20.0	100.0
1972/73:						
Amount	1,000 cwt.	13,325.3	3,174.4	16,499.7	4,553.7	21,053.4
Percentage of total	Percent	63.3	15.1	78.4	21.6	100.0

1/ Data for Alaska and Hawaii are included before and after they became States. Data for territories are not included.

2/ Year beginning August 1 and ending July 31.

3/ Does not include rice for military use or rice used for starch, feed, and other miscellaneous purposes.

4/ Includes 565,400 hundredweight in 1956/57, 1,166,200 hundredweight in 1961/62, 765,780 hundredweight in 1966/67, 802,001 hundredweight in 1971/72, and 661,566 hundredweight in 1972/73 distributed from Commodity Credit Corporation stocks to schools, institutions, and welfare agencies.

Source: 1956/57 and 1961/62 from Distribution Patterns of Rice in the United States, U.S. Dept. Agr., ERS-186, July 1964; 1966/67 from Distribution of Rice in the United States, 1966-67, U.S. Dept. Agr., ERS-408, April 1969; 1969-70 from Distribution Patterns for U.S. Rice, 1969-70, U.S. Dept. Agr., ERS-484, May 1972; 1971/72 from Market Patterns for U.S. Rice, 1971-72, U.S. Dept. Agr., ERS-528, August 1973; and 1972/73 from survey.

Table 2.--Direct food and processed-food consumption of rice: Annual average consumption, changes, and their causes for 3-year periods, United States, marketing years 1961-73 1/

Item	Average annual consumption 2/			Change in annual total consumption due to--		
					Changed per capita consumption	
	Per capita	Total	Change over previous period	Increase in population 3/	By same population as in previous 3-year average	By additional population since previous 3-year average 4/
	Pounds	1,000 cwt.				
3-year period						
1961-64.....	7.0	12,961	2,750	503	2,141	106
1964-67.....	7.5	14,386	1,425	511	880	34
1967-70.....	7.6	15,102	716	441	267	8
1970-73 5/..	7.2	14,838	-264	517	-755	-26
Yearly: 6/						
1970/71.....	7.7	15,557	2,130	174	1,931	25
1971/72.....	7.0	14,452	-1,105	192	-1,281	-16
1972/73 5/..	7.0	14,502	50	127	-76	-1

1/ Marketing years begin August 1 and end July 31.
2/ Milled grain equivalent of all the food products processed from rice. Does not include rice used for alcoholic beverages.
3/ Assuming same per capita consumption as in previous 3-year period.
4/ Change in consumption accounted for by assuming the same change in per capita consumption by the increase in population (new population) since the previous period.
5/ Preliminary.
6/ Year-to-year analysis of the 3-year period, 1970-73.

Source: Adapted from Food Grain Statistics Through 1967, and Supplements, U.S. Dept. Agr., Bul. No. 423; and Food Consumption Prices Expenditures and Supplements, U.S. Dept. Agr., Agr. Econ. Rpt. No. 138.

Table 3.--Milled rice: Distribution for direct food use in the United States, by region and order of relative importance, marketing years 1972/73 and 1971/72 1/

Region 2/	Distribution as percentage of U.S. total		Rank by percentage of U.S. total	
	1972/73	1971/72	1972/73	1971/72
	Percent	Percent	Number	Number
Middle Atlantic	23.3	24.2	1	1
Pacific	21.4	21.3	2	2
South Atlantic	16.3	17.7	3	3
West South Central	16.3	14.2	4	4
East North Central	8.4	9.8	5	5
East South Central	3.3	4.9	8	6
West North Central	5.7	3.3	6	7
New England	3.6	3.0	7	8
Mountain	1.7	1.6	9	9
U.S. total	100.0	100.0	--	--
	Amount distributed per capita		Rank by distribution per capita	
	Pounds	Pounds		
Pacific	10.6	10.3	2	1
West South Central	10.9	9.3	1	2
Middle Atlantic	8.3	8.3	3	3
South Atlantic	6.8	7.4	4	4
East South Central	3.4	4.9	7	5
New England	4.0	3.2	6	6
East North Central	2.8	3.1	8	7
West North Central	4.6	2.5	5	8
Mountain	2.5	2.5	9	9
U.S. total	6.4	6.3	--	--

1/ Includes all rice distributed for direct food use by civilian population, including rice distributed by USDA to schools, institutions, and welfare agencies and apparently includes commercial sales to military commissaries operated within the Nation's borders. Marketing years begin August 1 and end July 31.

2/ See table 4 for the States in each region.

Source: 1971/72 data from Market Patterns for U.S. Rice, 1971-72, U.S. Dept. Agr., ERS-528, and 1972/73 data from survey.

Table 4--Milled rice: Distribution for direct food use by State, region, and distributor; by size of package and type of grain and per capita, marketing year August 1, 1972 - July 31, 1973--Continued

State and region	Quantity distributed							Type of grain 1/			
	By millers and repackagers			By Government 2/	Total 3/	Percentage of U.S. total 3/	Per capita 4/	Long	Medium	Short	Specialty rice 5/
	5 pounds and under	5.1 - 25 pounds	25.1 pounds and over								
	1,000 cwt.					Percent	Pounds	Percent			
Maine	9.0	.9	.5	12.0	22.4	.2	2.2	87.7	12.3	--	55.7
New Hampshire	8.0	1.4	2.5	3.4	15.4	.1	2.0	84.9	15.1	--	57.2
Vermont	2.1	.4	.2	.4	3.1	6/	.7	100.0	--	--	67.1
Massachusetts	113.5	24.3	147.0	46.9	331.7	2.5	5.7	81.3	17.4	1.3	32.6
Rhode Island	14.4	.7	2.5	.8	18.4	.1	1.9	97.1	2.9	--	42.9
Connecticut	61.5	12.5	12.5	3.4	90.0	.7	2.9	87.3	12.7	--	53.5
New England	208.5	40.3	165.2	67.0	481.0	3.6	4.0	83.6	15.5	.9	38.9
New York	821.4	435.8	327.0	19.7	1,603.9	12.0	8.8	75.7	19.5	4.8	21.6
New Jersey	566.0	424.9	157.0	6.5	1,154.5	8.7	15.8	72.2	27.8	--	15.0
Pennsylvania	255.3	25.7	56.9	10.5	348.5	2.6	2.9	69.8	30.2	--	36.8
Middle Atlantic	1,642.7	886.5	541.0	36.7	3,106.9	23.3	8.3	73.8	23.7	2.5	20.8
Ohio	154.3	21.8	31.5	7.4	215.0	1.6	2.0	74.0	25.9	.1	42.1
Indiana	34.0	17.6	18.8	9.4	79.8	.6	1.5	63.5	36.5	--	37.4
Illinois	265.9	99.5	175.4	6.5	547.3	4.1	4.9	67.9	31.6	.5	25.5
Michigan	146.8	15.9	34.1	6.4	203.2	1.5	2.3	80.9	18.6	.5	35.5
Wisconsin	51.9	5.4	12.9	8.2	78.4	.6	1.7	78.1	21.9	--	48.9
East North Central	653.0	160.3	272.6	37.9	1,123.7	8.4	2.8	71.8	27.9	.3	32.8
Minnesota	399.1	6.1	102.9	6.1	514.2	3.8	13.2	13.2	86.7	.1	7.4
Iowa	21.9	2.3	2.4	2.0	28.6	.2	1.0	64.5	35.5	--	35.3
Missouri	63.6	9.2	24.2	20.5	117.5	.9	2.5	65.0	34.9	.1	34.0
North Dakota	4.7	.6	7.6	2.6	15.5	.1	2.5	81.2	18.8	--	72.6
South Dakota	3.2	.8	.6	2.7	7.2	.1	1.1	70.2	29.8	--	33.7
Nebraska	20.0	2.4	4.1	1.0	27.4	.2	1.8	61.1	38.9	--	28.9
Kansas	31.0	6.7	7.7	4.9	50.4	.4	2.2	74.2	25.8	--	26.8
West North Central	543.3	28.2	149.6	39.7	760.8	5.7	4.6	29.2	70.7	.1	15.4
Delaware	.3	.2	.3	5.4	6.2	.1	1.1	69.3	30.7	--	50.6
Maryland	81.5	20.7	20.1	4.0	126.4	1.0	3.2	65.9	32.9	1.2	53.4
District of Columbia	66.1	13.7	24.1	1.6	105.5	.8	14.3	93.5	6.5	--	16.5
Virginia	66.7	14.4	20.8	15.8	117.7	.9	2.5	67.9	32.1	--	35.1
West Virginia	9.3	.5	.3	1.2	11.4	.1	.6	95.9	4.1	--	30.6

Continued

Table 4--Milled rice: Distribution for direct food use by State, region, and distributor; by size of package and type of grain and per capita, marketing year August 1, 1972 - July 31, 1973--Continued

North Carolina	171.2	25.7	17.2	30.1	244.3	1.8	4.7	85.3	14.6	.1	22.8
South Carolina	217.5	140.1	62.9	19.8	440.3	3.3	16.7	69.5	30.5	--	7.7
Georgia	197.5	46.7	19.2	33.7	297.1	2.2	6.3	74.4	25.6	--	17.2
Florida	438.8	139.0	218.1	17.6	813.5	6.1	10.9	95.9	3.9	.2	19.1
South Atlantic	1,249.0	401.1	383.0	129.1	2,162.3	16.3	6.8	83.2	16.7	.1	19.7
Kentucky	21.1	2.0	1.3	6.2	30.6	.2	.9	65.6	34.4	--	33.9
Tennessee	69.7	4.9	3.6	5.2	83.4	.6	2.0	58.4	41.6	--	25.6
Alabama	123.1	13.9	7.8	45.7	190.6	1.4	5.4	81.2	18.8	--	15.8
Mississippi	100.2	6.7	13.5	18.5	138.9	1.0	6.2	80.8	19.2	--	10.3
East South Central	314.0	27.5	26.2	75.6	443.4	3.3	3.4	75.2	24.8	--	17.3
Arkansas	58.8	4.2	9.9	3.6	76.5	.6	3.8	76.8	23.2	--	8.9
Louisiana	322.0	249.7	268.4	38.9	879.0	6.6	23.6	51.4	48.6	6/	2.3
Oklahoma	38.5	3.2	5.0	30.5	77.2	.6	2.9	77.3	22.7	--	26.6
Texas	422.2	97.6	510.2	109.2	1,139.3	8.6	9.9	87.5	12.5	--	50.2
West South Central	841.5	354.7	793.6	182.2	2,171.9	16.3	10.9	71.6	28.4	6/	27.9
Montana	7.4	.9	.8	2.5	11.7	.1	1.6	97.0	--	3.0	36.8
Idaho	11.9	.9	3.6	2.7	19.1	.1	2.5	91.6	5.9	2.5	22.8
Wyoming	.4	.3	.2	.6	1.4	6/	.4	74.4	24.5	1.1	47.1
Colorado	44.1	6.8	8.9	2.0	61.8	.5	2.6	88.9	9.5	1.6	44.4
New Mexico	6.2	1.4	4.2	2.1	13.8	.1	1.3	80.6	19.4	--	51.8
Arizona	38.6	5.7	14.7	10.4	69.4	.5	3.5	77.9	20.8	1.3	27.9
Utah	11.6	5.3	21.0	1.7	39.7	.3	3.5	75.9	20.0	4.1	28.5
Nevada	1.5	3.4	3.0	2.6	10.5	.1	2.0	89.9	10.1	--	66.3
Mountain	121.6	24.8	56.4	26.6	227.4	1.7	2.7	83.4	14.7	1.9	35.8
Washington	59.4	15.5	51.2	5.1	131.3	1.0	3.9	63.8	21.5	14.7	22.4
Oregon	43.8	10.6	52.6	5.8	112.9	.8	5.1	73.2	17.6	9.2	16.1
California	643.5	347.5	1,017.3	55.8	2,064.1	15.5	10.2	56.6	38.9	4.5	15.8
Alaska	2.8	1.1	.1	.7	4.7	6/	1.6	98.2	--	1.8	86.9
Hawaii	30.5	252.0	244.2	8.2	534.9	4.0	69.4	4.0	92.7	3.3	1.2
Pacific	780.1	626.6	1,365.5	75.7	2,847.8	21.4	10.6	47.7	47.4	4.9	13.4
U.S. total	6,353.7	2,549.9	3,753.0	668.6	13,325.3	100.0	6.4	67.0	31.2	1.8	21.6

1/ Does not include rice distributed by Government. 2/ Breakdown of Government distribution by package size was not available. Quantity distributed by Government was compiled by Food Nutrition Service staff and includes only the rice distributed through schools, institutions and welfare (July 1-June 30) and does not include rice distributed to armed forces. 3/ Figures may not add to totals due to rounding. 4/ February 1, 1972, civilian, resident population estimates (interpolated from Bureau of Densus estimates) were used in per capita calculations. 5/ Specialty rice includes parboiled, precooked, brown and other than regularly milled rice distributed by mills and repackagers. Percentages are based on total quantities of rice distributed less Government distribution. 6/ Less than 0.1 when rounded.

Source: All except Government distribution data from survey. Government data from records of Food and Nutrition Service, U.S. Dept. Agr.

Table 5 .--Milled rice: Distribution for direct food use by region and distributor, by size of package and type of grain, and per capita, marketing years 1971/72 and 1972/73 1/

Region and year 2/	Quantity distributed							Type of grain 3/			
	By millers and repackagers			By Government 4/	Total 5/	Percentage of U.S. total 5/	Per capita 6/	Long	Medium	Short	Specialty rice 7/
	5 pounds and under	5.1-25 pounds	25.1 pounds and over								
	1,000 cwt.					Percent	Pounds	Percent			
New England											
1971/72	207.3	31.6	80.8	59.6	379.3	3.0	3.2	83.8	15.3	.9	48.9
1972/73	208.5	40.3	165.2	67.0	481.0	3.6	4.0	83.6	15.5	.9	38.9
Middle Atlantic											
1971/72	1,581.0	894.8	594.4	33.2	3,103.4	24.2	8.3	67.8	29.3	2.9	20.2
1972/73	1,642.7	886.5	541.0	36.7	3,106.9	23.3	8.3	73.8	23.7	2.5	20.8
East North Central											
1971/72	655.8	151.1	414.4	42.9	1,264.3	9.8	3.1	64.4	34.9	.7	25.0
1972/73	653.0	160.3	272.6	37.9	1,123.7	8.4	2.8	71.8	27.9	.3	32.8
West North Central											
1971/72	203.7	17.7	146.1	50.0	417.4	3.3	2.5	66.3	31.9	1.8	27.0
1972/73	543.3	28.2	149.6	39.8	760.8	5.7	4.6	29.2	70.7	.1	15.4
South Atlantic											
1971/72	1,225.9	403.3	471.0	174.2	2,274.4	17.7	7.4	82.6	17.2	.2	16.9
1972/73	1,249.0	401.1	383.0	129.1	2,162.3	16.3	6.8	83.2	16.7	.1	19.7
East South Central											
1971/72	294.0	24.4	211.1	101.4	630.9	4.9	4.9	73.5	26.5	---	11.0
1972/73	314.0	27.5	26.2	75.6	443.4	3.3	3.4	75.2	24.8	---	17.3
West South Central											
1971/72	734.6	357.9	516.0	208.7	1,817.1	14.2	9.3	69.6	30.3	.1	10.1
1972/73	841.5	354.7	793.6	182.2	2,171.9	16.3	10.9	71.6	28.4	8/	27.9
Mountain											
1971/72	108.3	16.4	44.5	41.2	210.4	1.6	2.5	89.0	9.4	1.6	38.7
1972/73	121.6	24.8	56.4	24.6	227.4	1.7	2.7	83.4	14.7	1.9	35.8
Pacific											
1971/72	884.8	662.2	1,100.9	90.8	2,738.7	21.3	10.3	50.1	43.3	6.6	13.7
1972/73	780.1	626.6	1,365.5	75.7	2,847.8	21.4	10.6	47.7	47.4	4.9	13.4
U.S. total											
1971/72	5,895.3	2,559.3	3,579.1	802.0	12,835.8	100.0	6.3	67.3	30.3	2.4	18.1
1972/73	6,353.7	2,549.9	3,753.0	668.6	13,325.3	100.0	6.4	67.0	31.2	1.8	21.6

1/ August 1--July 31. 2/ For States included in each region, see table 4. 3/ Does not include rice distributed by Government. 4/ Breakdown of Government distribution by package size was not available. Quantity distributed by Government was compiled by Food and Nutrition Service staff and includes only the rice distributed through schools, institutions and welfare, does not include rice distribution to armed forces. 5/ Figures may not add down or across to totals due to rounding. 6/ February 1, 1972, and February 1, 1973, civilian resident population estimates, based on and interpolated from Bureau of the Census estimates, respectively, were used in per capita calculations. 7/ Specialty rice includes parboiled, precooked, brown and other than regularly milled rice distributed by mills and repackagers. 8/ Less than 0.1 percent when rounded.

Source: 1971/72 data from Market Patterns for U.S. Rice, 1971-72, U.S. Dept. Agr., ERS-528, August 1973. All except Government distribution data for 1972/73 from survey. Government data from records of Food and Nutrition Service, U.S. Dept. Agr.

Table 6.--Specialty rice distributed by millers and repackagers, by kind and by type of grain, United States and territories, marketing years, 1971/72 and 1972/73 1/

Year and kind	Type of grain			Total
	Long	Medium	Short	
	1,000 cwt.			
1971/72:				
Parboiled	1,371.9	0	0.4	1,372.3
Precooked 2/	849.9	0	0	849.9
Brown	50.5	11.0	72.1	133.6
Other 3/	2.9	0	0	2.9
Total	2,275.2	11.0	72.5	2,358.7
1972/73:				
Parboiled	1,605.9	0	4.2	1,610.1
Precooked 2/	763.1	0	0	763.1
Brown	243.5	19.5	74.5	337.5
Other 3/	58.0	0	0	58.0
Total	2,670.5	19.5	78.7	2,768.7

1/ Year beginning August 1 and ending July 31.
2/ Includes regular milled rice processed into specialty rice by repackagers. Does not include specialty rice that may have been distributed by Government.
3/ Mostly flavored rice.

Source: 1971/72 from Market Patterns for U.S. Rice, 1971/72, U.S. Dept. of Agr., ERS-528, August 1973; and 1972/73 from Survey.

Table 7 .--Milled rice: Shipments of enriched and talc-coated rice by mills to wholesale, retail, institutional and rice repackager outlets in the 48 conterminous states, 1972/73 1/

Item	Quantity of rice treated	Percentage of total shipments treated	Product added per cwt. of rice
	1,000 cwt.	Percent	Pound
Enriched 2/	5,677.1	47.1	---
Powdered	4,763.5	39.5	---
Rinse resistant premix	913.5	7.6	---
Riboflavin added	113.0	.9	---
Vitamin D added	14.7	.1	---
Calcium added	2,561.0	21.3	---
Talc-coated	2,981.9	24.8	---
Talc added	---	---	0.46
Glucose added	---	---	0.45

1/ Only mill shipments are included as these additions are made during the milling process. Alaska and Hawaii shipments were intentionally omitted. For these reasons, the total shipments of 12,043,700 hundredweight differ slightly from total rice distributed for direct food use, table 4.

2/ Enriched rice has thiamin, niacin and iron added. Of the enriched rice, about 84 percent was powdered enrichment and 16 percent was a rinse resistant premix.

Table 8.--Milled rice: Government distribution to regions of the United States and territories, by outlets, marketing years 1971/72 and 1972/73

Region 1/	1971/72 2/				1972/73 2/			
	Schools	Institutions	Welfare agencies	Total 3/	Schools	Institutions	Welfare agencies	Total 3/
	1,000 cwt.							
New England	8.6	4.4	46.6	59.6	8.5	4.4	54.1	67.0
Middle Atlantic	19.9	11.8	1.5	33.2	25.4	11.3	4/	36.7
East North Central	15.7	9.7	17.6	42.9	15.8	9.6	12.4	37.9
West North Central	10.8	3.6	35.6	50.0	7.8	4.0	27.9	39.7
South Atlantic	62.7	16.9	94.6	174.2	60.9	17.4	50.9	129.1
East South Central	24.1	3.9	73.4	101.4	20.5	4.0	51.1	75.6
West South Central	55.9	12.0	140.8	208.7	54.7	12.0	115.5	182.2
Mountain	8.6	1.8	30.8	41.2	8.0	1.8	14.5	24.6
Pacific	22.8	10.0	57.9	90.8	22.5	10.6	42.6	75.7
United States 3/	228.9	74.2	498.9	802.0	224.2	75.0	569.4	668.6
Territories	86.1	8.9	170.1	265.1	117.6	9.8	300.0	427.4
United States and territories 3/	315.0	83.1	669.0	1,067.2	341.8	84.9	669.4	1,096.0

1/ See table 4 for States in each region.
2/ Year beginning July 1 and ending June 30.
3/ Figures may not add to totals due to rounding.
4/ Less than 50 cwt.

Source: 1971/72 from Market Patterns for U.S. Rice, 1971-72, U.S. Dept. Agr., ERS-528, August 1973; and 1972/73 from records of Food and Nutrition Service, U.S. Dept. Agr.

Table 9.--Milled rice: Department of Defense purchases for distribution, marketing years 1971/72 and 1972/73 1/

Use and package size	Total quantity	Type of grain			Percentage specialty rice 2/
		Long	Medium	Short	
	Cwt.	Percent	Percent	Percent	Percent
1971/ 72:					
Specification for Armed Forces feeding:	46,292	100	--	--	100
5 pounds and under	0	--	--	--	--
Over 5 pounds - 25 pounds	42,312	100	--	--	100
Over 25 pounds	3,980	100	--	--	100
Brand-name for resale in overseas military commissaries 3/	113,352	NA	NA	NA	100
5 pounds and under	63,726	NA	NA	NA	100
Over 5 pounds - 25 pounds	41,826	NA	NA	NA	100
Over 25 pounds	7,800	NA	NA	NA	100
Direct purchases for overseas indigenous feeding 4/	0	--	--	--	--
Total	159,644	NA	NA	NA	100
1972/73					
Specification for Armed Forces feeding:	55,320	100	0	0	100
5 pounds and under	0				
Over 5 pounds - 25 pounds	51,372	100	0	0	100
Over 25 pounds	3,948	100	0	0	100
Brand-name for resale in overseas military commissaries: 3/	95,788	NA	NA	NA	100
5 pounds and under	48,701	NA	NA	NA	NA
Over 5 pounds - 25 pounds	41,626	NA	NA	NA	NA
Over 25 pounds	5,461	NA	NA	NA	NA
Direct purchase for overseas indigenous feeding	62,370	100	0	0	100
5 pounds and under	62,370	100	0	0	100
Total	213,478	NA	NA	NA	100

NA= Not available.
1/ Year begining August 1, and ending July 31.
2/ Parboiled and precooked rice.
3/ Does not include rice sold in nonmilitary commissaries.
4/ None purchased for this purpose during this year.

Source: Defense Supply Agency, Headquarters, Defense Support Center records, U.S. Department of Defense.

Table 10--Milled rice: Distribution to manufacturers by type of rice and by type of main product processed in the United States, marketing years 1971/72 and 1972/73 1/

Marketing year and type of rice	Type of product						Total 2/	Percentage of U.S. total 3/
	Cereal	Soup	Baby food	Package mixes	Beer	Other		
	1,000 cwt.							Percent
1971/72:								
Long grain	61.0	645.6	0	387.6	0	18.6	1,112.8	14.8
Medium grain	923.2	0	0	0	112.5	72.0	1,107.7	14.7
Short grain	714.9	0	0	0	357.2	0	1,072.1	14.2
Broken	401.8	0	127.4	0	2,748.9	55.2	3,333.3	44.2
Mill run	0	0	0	0	792.4	0	792.4	10.5
Brewers	0	0	0	0	71.0	0	71.0	1.0
Flour	1.3	0	13.3	33.5	0	0	48.1	.6
Total 2/	2,102.2	645.6	140.7	421.1	4,082.0	145.8	7,537.4	100.0
Percent 3/	27.9	8.5	1.9	5.6	54.2	1.9	100.0	--
1972/73:								
Long grain	54.1	367.1	.6	168.0	0	18.1	607.9	7.9
Medium grain	941.2	0	0	0	652.9	36.8	1,630.9	21.1
Short grain	1,043.6	0	4/	0	317.3	0	1,361.0	17.6
Broken	327.2	0	141.5	0	2,678.8	20.1	3,167.6	41.0
Mill run	5.9	.1	.0	0	899.1	0	905.1	11.7
Brewers	.3	0	0	0	5.6	0	5.9	0.1
Flour	0	0	7.8	42.0	0	0	49.7	0.6
Total 2/	2,372.3	367.2	149.9	210.0	4,553.7	75.0	7,728.1	100.0
Percent 3/	30.7	4.8	1.9	2.7	58.9	1.0	100.0	

1/ August 1 - July 31. Totals do not include purchases from Commodity Credit Corporation or imports. Changes in stocks of rice from the begining to end of year are not accounted for in these data.
2/ Figures may not add to totals due to rounding.
3/ Percentages were computed from unrounded data.
4/ Less than 50 cwt.
Source: 1971/72 data from Market Patterns for U.S. Rice, 1971-72, U.S. Dept. Agr., ERS-528, August 1973 and 1972/73 from survey.

Table 11.--Milled rice: Distribution for direct food use by territory and distributor, by size of package and type of grain, and per capita, marketing years 1971/72 and 1972/73 1/

Year and territory	Quantity distributed 2/							Type of grain 5/			Specialty rice 6/
	By millers and repackagers: 5 lb. and under	5.1-25 lb.	25.1 lb. and over	By Government 3/	Total	Percentage of total	Per capita 4/	Long	Medium	Short	
	1,000 cwt.					Percent	Pounds	Percent			
1971/72:											
Puerto Rico	1,933.9	563.1	1,113.6	233.6	3,844.3	94.1	138.1	2.1	22.3	75.6	.6
Virgin Islands	29.0	8.7	3.3	2.5	43.5	1.1	65.0	71.3		28.7	55.9
Guam	2.1	50.1	114.7	1.5	168.4	4.1	183.0	6.6	64.9	28.5	0
American Samoa	7/	0	0	.8	.8	7/	2.7	100.0	0	0	0
Other 8/	0	0	0	26.8	26.8	.7	16.2	0	0	0	0
Total	1,965.0	622.0	1,231.7	265.1	4,083.8	100.0	130.2	3.1	23.9	73.0	1.2
1972/73:											
Puerto Rico	2,262.3	730.3	336.0	390.0	3,718.6	93.8	132.6	6.7	20.9	72.4	.6
Virgin Islands	31.4	10.3	.8	3.8	46.4	1.2	65.3	73.9	0	26.1	4.9
Guam	6.3	23.1	101.2	1.8	132.4	3.3	176.5	7/	100.0	0	7/
American Samoa	7/	0	0	.9	.9	7/	3.1	100.0	0	0	100.0
Other	2.7	6.3	25.4	30.9	65.4	1.7	32.5	7/	71.6	28.4	/
Total	2,302.8	770.0	463.5	9/427.4	9/3,963.7	100.0	127.8	7.1	24.1	68.8	1.1

1/ Includes all rice distributed for direct food use by civilian population, year August 1 - July 31.

2/ Figures may not add to totals due to rounding.

3/ Compiled by Food and Nutrition Service. Includes rice distributed by USDA to schools, institutions, and welfare, fiscal year July 1-June 30. Does not include rice distributed to U.S. Armed Forces.

4/ The Feb. 1, 1972 and 1973 estimated civilian population figures interpolated from Bureau of Census estimates, were used in per capita calculations.

5/ Does not include rice distributed by Government.

6/ Includes parboiled, precooked, brown and other than regularly milled rice distributed by mills and repackagers. Percentages are based on total quantities of rice distributed less Government distribution.

7/ Rounded to less than .1.

8/ Trust territories (the Marshall, Marianna, and Caroline islands).

9/ Excludes 35,732 pounds distributed to American schools for children of military personnel serving in Europe, Japan, and Okinawa.

Source: 1971/72 data from Market Patterns for U.S. Rice, 1971/72, U.S. Dept. Agr., ERS-528, August 1973 and 1972/73 from survey data. Government data from records of Food and Nutrition Service, U.S. Dept. Agr.

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